

What Is Claimed Is:

1. A system for providing emergency relief location information using a mobile communication network,
5 comprising:

a mobile communication terminal for a relief requester having an emergency key for requesting a relief, a storage means for storing emergency contact information for an emergency contact in an emergency mode and emergency
10 contact information to be transmitted to an emergency management system of an emergency contact point connected thereto, and a control means for allowing a relief requester to access the emergency management system of the emergency contact point that is previously stored in the
15 emergency mode through the emergency key and then to transmit emergency contact information stored at the storage means, and controlling an emergency mode process so that only a call connection request to the emergency management system is limitedly permitted and a tapping mode
20 for precluding a receiving speech and transmitting only the sending speech upon the call connection is automatically performed; and

the emergency management system of the emergency contact point having an emergency information management
25 server that finds a location of the mobile communication terminal for the relief requester according to emergency contact information from the mobile communication terminal for the relief requester that is transferred through the mobile communication network, and then transmits emergency
30 contact information and location information of the relief requester that are received from the mobile communication terminal for the relief requester to a mobile communication terminal of a relief personnel adjacent to the mobile

communication terminal for the relief requester.

2. The system as claimed in claim 1, wherein a control means of the mobile communication terminal for the relief requester turns on the power to control the emergency mode if the emergency key is depressed with the power switch turned off.

3. The system as claimed in claim 1 or 2, wherein a control means of the mobile communication terminal for the relief requester controls the mobile communication terminal to operate in a non-sound/non-light mode in an emergency mode.

15 4. The system as claimed in claim 1, wherein emergency contact information stored at the storage means of the mobile communication terminal for the relief requester is information on the relief requester representing personal information of the relief requester and short character 20 information representing the emergency situation.

5. The system as claimed in claim 1, wherein the mobile communication terminal for the relief requester further comprises a GPS receiving means for providing 25 location information of the relief requester to the emergency management system.

6. The system as claimed in claim 1, wherein the mobile communication terminal for the relief personnel 30 further comprises a GPS receiving means for providing location information of the relief personnel.

7. The system as claimed in claim 6, wherein the GPS

receiving means of the mobile communication terminal for the relief personnel includes a means for calculating a distance and direction from the relief requester by comparing its location information with location
5 information of the mobile communication terminal for the relief requester, and displaying a location coordinate of the mobile communication terminal for the relief requester and a location coordinate of the mobile communication terminal for the relief personnel together.

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8. The system as claimed in any one of claims 5 to 7, wherein the mobile communication terminal for the relief requester provides location information to the emergency management system using the GPS receiving means in a state
15 where artificial satellite information used for location detection is added to location information,

the emergency management system transmits location information of the mobile communication terminal for the relief requester that is provided to the mobile
20 communication terminal for the relief personnel in a state where artificial satellite information is included in location information,

the GPS receiving means of the mobile communication terminal for the relief personnel detects the location from
25 the artificial satellite same to the artificial satellite used for location detection in the mobile communication terminal for the relief requester according to received artificial satellite information, and then detect the location coordinate of the mobile communication terminal
30 for the relief personnel.

9. The system as claimed in claim 1 or 7, wherein the mobile communication terminal for the relief requester

further includes a beacon signal generator for generating a beacon signal when the emergency key is selected, and

the mobile communication terminal for the relief personnel further includes a beacon signal receiver for
5 receiving the beacon signal and informing its results.

10. The system as claimed in claim 9, further comprising a plurality of beacons whose locations are identified, and

10 if the output for the input of the beacon signal generated in the mobile communication terminal for the relief requester is sensed from the beacon near the mobile communication terminal for the relief requester operating in the emergency mode, the emergency management system
15 detects the locations of the mobile communication terminal for the relief requester from respective beacons and then providing detected location information to the mobile communication terminal for the relief personnel.

20 11. The system as claimed in claim 1 or 4, wherein emergency contact information stored at the storage means further contains information on locations where the relief requester frequently visits.

25 12. The system as claimed in claim 1, wherein the emergency management system comprises:

a management computer terminal for displaying emergency contact information and an emergency situation short message that are transmitted from the mobile
30 communication terminal for the relief requester,

a short message processing server for processing the short message received from the mobile communication terminal for the relief requester, and then displaying and

storing the processed message at a database via the management computer terminal and other display means,

5 a database for storing emergency contact information and the emergency situation short message received from the mobile communication terminal for the relief requester,

10 a location retrieval server for retrieving the location of the relief requester depending on location information included in emergency contact information received from the mobile communication terminal for the relief requester, and location information of the relief personnel, according to the request by the emergency information management server, and

15 a database for storing map information, character information on the topographic features, and location information of the relief personnel.

13. The system as claimed in claim 1 or 12, wherein the emergency management system further comprises a database for storing financial information every person,

20 if emergency contact information is received from the mobile communication terminal for the relief requester, the emergency management system performs an emergency financial transaction authentication process for finding financial information of the relief requester from individual financial information and then transmitting financial information of the relief requester to the value added network server to stop a financial transaction for the relief requester, and

the emergency management system further comprises:

30 a value added network server for connecting the relief requester depending on information on the financial transaction received from the emergency management system and a corresponding financial institute to determine

whether to stop the financial transaction for the relief requester, according to the request of the emergency management system to stop the financial transaction through the value added network and financial information of the
5 relief requester, and

a financial institute system for stopping/restoring the transaction state for a corresponding financial transaction of the relief requester using information from the value added network.

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14. The system as claimed in claim 13, wherein the financial information every person stored in the database contains the name of a bank, an account number used in the bank, the name of a credit card company, the type of the
15 credit card, the number of the credit card, and an account number of the stocks and bonds.

15. The system as claimed in claim 13, wherein the financial institute system stops the financial transaction
20 for a corresponding relief requester if a request for emergency authentication is received from the value added network server, and allows a virtual transaction process same to the normal transaction to be performed if a financial transaction for the relief requester is attempted.

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16. The system as claimed in claim 15, wherein the financial institute system generates an error message to a corresponding transaction if a direct financial transaction for the relief requester such as a withdrawal of cash is
30 made.

17. A method for providing emergency relief location information using a mobile communication network, the

method comprising the steps of:

a relief request access process by a mobile communication terminal of a relief requester, for executing an emergency mode according to the input of the emergency key of the mobile communication terminal to connect to an emergency management system of an emergency contact point that is previously stored at a storage means through a mobile communication network;

an emergency contact information transmit process by a mobile communication terminal for the relief requester, for transmitting information on the relief requester and emergency contact information containing location information, which are previously stored at the storage means, to the emergency management system;

a process of deciding the location of the relief requester by the emergency management system, for receiving emergency contact information from the mobile communication terminal for the relief requester and then generating a current location of the relief requester based on location information of the mobile communication terminal for the relief requester that is contained in emergency contact information;

a process of retrieving the relief personnel by the emergency management system, for retrieving the relief personnel nearest to the relief requester that is decided by retrieving location information of the relief personnel;

a process of commanding the relief personnel by the emergency management system, for accessing the mobile communication terminal of the searched relief personnel and then transmitting emergency contact information containing location information of the relief requester received from the relief requester, so that a corresponding relief personnel can perform a relief work; and

a receipt report signal transmit process for transmitting a receipt report signal indicating that the relief request has been received to the mobile communication terminal for the relief requester, if the 5 fact that information on the relief requester is received from the mobile communication terminal for the relief personnel.

18. The method as claimed in claim 17, wherein the
10 relief request receipt process of the mobile communication terminal further includes a process of determining whether the power is off and turning on the power when the power is off to perform the emergency mode, when an emergency key of the mobile communication device is depressed.

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19. The method as claimed in claim 17, wherein the process of transmitting emergency contact information of the mobile communication terminal for the relief requester further includes a process of transmitting surrounding 20 situation where the relief requester is placed to the emergency management system as a sound signal after being switched to a tapping mode.

20. The method as claimed in claim 17, further comprising a receipt report notice process by the mobile communication terminal for the relief requester for executing a vibration mode to perform a vibration function of a specific signal form, when the receipt report signal is received, and then informs the relief requester of the 30 fact.

21. The method as claimed in claim 17, wherein in the relief personnel search process, at least two relief

personnel near the mobile communication terminal for the relief requester are searched and then selected.

22. The method as claimed in claim 17, further
5 comprising:

a call connection request admission deciding process by the mobile communication terminal for the relief requester, for determining whether a call connection request made in a state where the emergency mode is
10 performed is the call connection request of the stored emergency contact point; and

a tapping mode execution process by the mobile communication terminal for the relief requester for not allowing the call connection if the counterpart who made
15 the call connection is not the stored emergency contact point, and allowing the call connection to the tapping mode if the counterpart who made the call connection is the stored emergency contact point.

20 23. The method as claimed in claim 17 or 22, further comprising:

a tapping sound storage process by the emergency management system, for storing a tapping sound provided from the mobile communication terminal for the relief
25 requester connected thereto when the tapping mode is executed in the mobile communication terminal for the relief requester; and

a tapping sound transfer process for transmitting the tapping sound provided from the mobile communication
30 terminal for the relief requester to a mobile communication terminal of a corresponding relief personnel.

24. The method as claimed in claim 17, further

comprising:

a release request process of the emergency mode by the mobile communication terminal for the relief requester, for performing a release request of the emergency mode in a 5 state where the terminal is connected to the emergency management system; and

a process of receiving the release request signal of the emergency mode from the mobile communication terminal for the relief requester and then notifying the release of 10 the emergency mode to the mobile communication terminal for the relief personnel.

25. The method as claimed in claim 17, further comprising a process for periodically storing location 15 information from the mobile communication terminal of herein the relief personnel, and wherein location information of the stored relief personnel is information of the relief personnel that is periodically updated.

20 26. The method as claimed in claim 25, wherein location information received from the mobile communication terminal for the relief personnel is information generated from GPS receiving information.

25 27. The method as claimed in claim 17, wherein location information of the relief requester that is transmitted the mobile communication terminal for the relief requester to the emergency management system, is information generated from GPS receiving information.

30 28. The method as claimed in claim 17 or 26, further comprising a location detection process of the relief requester by the mobile communication terminal for the

relief personnel for displaying its detected location coordinate along with a location coordinate of the mobile communication terminal for the relief requester received from the emergency management system, so that the mobile 5 communication terminal of a corresponding relief requester can be traced using these coordinates.

29. The method as claimed in claim 26 or 27, wherein in the process of transmitting emergency contact 10 information, information on the artificial satellites used to detect the location of location information is further contained,

the location of its own GPS is newly detected according to information on the artificial satellites 15 received from the emergency management system, and its detected location coordinate is then displayed along with the location coordinate of the mobile communication terminal for the relief requester.

20 30. The method as claimed in claim 17, wherein in the process of commanding the relief personnel of the emergency management system, if whether the beacon signal has been received from the beacon is sensed, the location of the mobile communication terminal of the relief request where 25 the beacon signals are generated from corresponding beacons is detected, and the detected location information is then transmitted to the mobile communication terminal for the relief personnel.

30 31. The method as claimed in claim 17, wherein in the process of transmitting emergency contact information, emergency contact information that is transmitted from the mobile communication terminal for the relief requester to

the emergency management system, contains information on the relief requester representing personal information of the relief requester and a short message that is previously written by the relief requester.

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32. The method as claimed in claim 31, wherein emergency contact information further contains location information that is registered in advance by a user.

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33. The method as claimed in claim 22, wherein in the process of determining the location of the relief requester of the emergency management system, generated location information of the relief requester contains a map data of a graphic form representing a current location of the 15 mobile communication terminal for the relief request and a character data describing the current location using a short sentence.

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34. The method as claimed in any one of claims 17 to 22 or 24 to 27, further comprising:

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a stop request process of the emergency management system for accessing the value added network server to transmit financial information on the relief requester and then requesting the stop of the financial transaction for a corresponding relief requester, if it is determined that emergency contact information received from the mobile communication terminal for the relief requester is a relief request depending on the emergency mode;

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an emergency authentication request process of the value added network server for making a corresponding financial institute request to perform the emergency authentication process depending on the emergency mode, according to financial information of the relief requester

received from the emergency management system at the request of the emergency management system to stop the financial transaction; and

5 a financial transaction stop process for stopping the financial transaction when the financial transaction for a corresponding relief requester is attempted according to the emergency authentication by the value added network server.

10 35. The method as claimed in claim 34, wherein in the financial transaction stop process of the financial institute, a virtual transaction process is performed same to the normal financial transaction when the financial transaction for the relief requester is attempted.

15 36. The method as claimed in claim 34, wherein in the financial transaction stop process of the financial institute, an error message for a corresponding financial transaction is generated when a direct financial 20 transaction such as cash withdrawal, etc. is attempted.

25 37. The method as claimed in any one of claims 34 to 36, wherein the financial transaction stop process of the financial institute further includes a process of transmitting the result of the financial transaction depending on the stop of the financial transaction to the emergency management system via the value added network server.

30 38. A system for providing emergency relief location information using a mobile communication network, comprises:

a mobile communication terminal on a transmitter' side

having a key for executing a location transmit mode, a
location detecting means for detecting a current location,
a storage means for storing contact information of a system
for providing location information to be called when the
5 location transmit mode is executed, and a control means
that controls a location transmit mode process for allowing
a user of the mobile communication terminal on the
transmitter' side to transmit the detected location to the
mobile communication terminal on a desired receiver' side;
10 and

a location information providing system that generates
a location information signal of the mobile communication
terminal on the transmitter' side using the detected
positioning signal provided from the mobile communication
15 terminal on the transmitter' side connected through the
mobile communication network, and transmits the location
information signal provided to the mobile communication
terminal on the receiver' side that is specified by the
user through the mobile communication network to provide
20 location information so that location information of the
mobile communication terminal on the transmitter' side on
the mobile communication terminal on the receiver' side.

39. The system as claimed in claim 38, wherein the
25 location detecting means of the mobile communication of the
transmitter' side is a GPS receiving means.

40. A method for providing emergency relief location
information using the mobile communication network, the
30 method comprising the steps of:

a process of transmitting the detected positioning
signal by the mobile communication terminal on the
transmitter' side, for selecting the location transmit mode

to access the location information providing system through the mobile communication network, assigning the mobile communication terminal on a counterpart receiver' side that will provide location information to the location information providing system, and transmitting the detected positioning signal representing its location that is currently detected;

a process of generating a location information signal by the location information providing system, for generating the location information signal of the mobile communication terminal on the transmitter' side according to the detected positioning signal received from the mobile communication terminal on the transmitter' side that provides location information; and

15 a process of transmitting the location information signal by the location information providing system, for performing a call connection to the mobile communication terminal on the receiver' side specified by the mobile communication terminal on the transmitter' side and
20 transmitting the generated location information signal so that the signal can be displayed on the mobile communication terminal on the receiver' side.

41. The method as claimed in claim 40, wherein the
25 detected positioning signal that is transmitted from the mobile communication terminal on the transmitter' side that provides location information to the location information providing system is information generated from the GPS receiving means.

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42. The method as claimed in claim 40, wherein location information that is generated through the process of generating the location information signal in the

location information providing system and is provided to the mobile communication terminal on the receiver' side, contains a map data of a graphic form representing a current location of the mobile communication terminal on 5 the receiver' side and a character data describing a current location using a short sentence.

43. The method as claimed in any one of claims 40 to 42, the process of transmitting the detected positioning 10 signal by the mobile communication terminal on the transmitter' side further includes a step of transmitting the message inputted by the user; and

the process of transmitting the location information signal by the location information providing system further 15 includes a step of transmitting the message provided from the mobile communication terminal on the transmitter' side along with the generated location information.